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10/029,766	12/18/2001	Adrian Crisan	1662-55100 JMH (P01-3806)	4713

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EXAMINER
ROMANO, JOHN J

ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/029,766	CRISAN ET AL.
	Examiner	Art Unit
	John J. Romano	2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>06 January 2006</u>.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,4-9,11-16,18-20,27 and 28</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1, 4-9, 11-16, 18-20 and 27-28</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1.   Applicant's amendment and response received January 6th, 2006, responding to

the October 20th, 2005, Office action provided in the rejections of claims 1, 4-9, 11-16,

18-20 and 27-28, wherein claims 1, 4-9, 11-16, 18-20 and 27-28 remain pending in the

application and which have been fully considered by the examiner.

Applicant arguing for the claims being patentable over *Marsh* (see pages 6-12 of

the amendment and response), primarily based on assertions on pages 6-10, where

applicant contends that independent claims are not anticipated by *Marsh* and

arguments pertaining to the dependent claims are not persuasive, as will be addressed

under Prior Art's Arguments – Rejections section at item 2 and the claim rejections

below. Accordingly, Applicants' arguments necessitated additional clarifications, in light

of the rejection of the claims over prior art provided in the previous Office action, to

further point out that *Marsh* discloses as such amended limitations. Thus, the rejection

of the claims over prior art is maintained in light of the necessitated additional

clarifications and rejections provided hereon and **THIS ACTION IS MADE FINAL.**

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Prior Art's Arguments – Rejections

2.   Applicant's arguments filed January 6th, 2006, in particular on page 8-10, have

been fully considered but they are not persuasive. For example,

(A) In regard to the argument that *Marsh* discloses a "bootable kernel" which is

an operating system (page 9, second paragraph of the amendment and response), the

examiner respectfully disagrees. As indicated by the Applicant (page 8, last paragraph

of the response), *Marsh* explicitly discloses:

> [0005] A kernel is the central module of an operating system. It is <u>the part
> of the operating system</u> that loads first, and it remains in RAM...while still
> providing all the essential services required by <u>other parts of the operating
> system</u> and applications. (emphasis added)

Although the kernel may be the central part of the operating system, it is not the

operating system. As an example, to simply portray the examiners position; a car has

an engine, but an engine is not a car, even if the engine is the central part of the car.

The examiner acknowledges that a kernel <u>may</u> be a simple operating system;

however, a kernel may also be interpreted as a central module to other programs as

well. This is further evident by *Marsh's* illustration (See *Marsh*, Figure 2, element 450 +

434), wherein *Marsh* shows the kernel (450) and the operating system (434) as separate entities.

Additionally, *Marsh* discloses (See *Marsh*, Page 3, paragraph [0033]), the system loader directs the microprocessor (CPU), to load the bootable kernel (450), and the operating system (434), wherein again, they are separate entities. Furthermore, *Marsh* discloses that the firmware patch is different from prior art software patches, such as the patch is not reliant on the command infrastructure as defined by the operating system (Figure 4, Paragraph [0038]); again further implying that the operating system is not executed. Thus, Marsh certainly discloses flashing an upgrade, wherein the CPU programs its ROM, without execution of an operating system by the CPU. Therefore, the examiner maintains the rejection in regard to the instant argument.

(B) In regard to Applicant's argument that *Marsh* teaches away from the concept of upgrading the ROM without the execution of an operating system, based on Marsh disclosing loading the kernel (page 9, last paragraph of the amendment and response), the examiner respectfully disagrees. The examiner refers the Applicant to section (A), above, wherein *Marsh* discloses upgrading the ROM without the execution of an operating system. Therefore, the rejection is maintained in light of the instant argument.

(C) Accordingly, the dependent claims to independent claims 1, 9, 16 and 27 are rejected at least for the reasons disclosed hereinabove.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
>
> described as set forth in section 102 of this title, if the differences between the subject matter
>
> sought to be patented and the prior art are such that the subject matter as a whole would have
>
> been obvious at the time the invention was made to a person having ordinary skill in the art to
>
> which said subject matter pertains. Patentability shall not be negatived by the manner in which
>
> the invention was made.

3.   Claims **1, 4, 6, 7, 9, 11, 13, 15, 16, 18, 20, 27** and **28** are rejected under 35

U.S.C. 103(a) as being unpatentable over Marsh et al., US 2002/0073304 A1

(hereinafter **Marsh**) and further in view of **Asco** et al., US 6,516,346, (hereinafter **Asco**)

and Jennery et al., US 6,742,025 (hereinafter **Jennery**).

In regard to claim **1**, **Marsh** discloses:

- *"A computer system, comprising:*

a central processing unit (CPU);..." (E.g., see Fig. 1 & Page 3, [0027]),

wherein, the microprocessor is the CPU.

- *"...and a programmable read only memory (ROM) coupled to said*

CPU..." (E.g., see Fig. 1 & Page 1, [0007]), wherein, the non-volatile

memory may be a EEPROM as disclosed in paragraph [0007] which is

both erasable and programmable. Also, it is shown in Figure 1 that the

ROM or non-volatile memory is coupled to the microprocessor.

- "... *said ROM containing a digital image; ...*" (E.g., see Fig. 1 & Page 2,
[0013]), wherein, instructions from the programmable non-volatile memory
or ROM are inherently a digital image; therefore the ROM contains a
digital image.

- "... *wherein said CPU programs its ROM during a system initialization*
... wherein the system initialization further comprises a booting of said
system..." (E.g., see Fig. 4 & Page 5, [0048]), wherein, the flash
application designated in the modified boot image, selected upon the
next boot of the computer (system initialization), is erasing and then
programming the non-volatile memory or ROM.

- "... *without execution of an operating system by the CPU...*" (E.g., see
Fig. 4 & Page 4, [0038]), wherein, the firmware patch is unique in that it
contains the execution code necessary (kernel) to perform a firmware
upgrade before the operating system is loaded and executed, wherein
the kernel is interpreted as a code module.

- "... *a connection to a network...*" (E.g., see Fig. 5 & Page 4, [0042]),
wherein, the system is presented within a network configuration.

- "... *flashes the system ROM with the upgraded image if the upgraded*
image is available for said ROM." (E.g., see Fig. 6 and Page 5,
Paragraph [0047] and [0048]), wherein, the delivered firmware is the
received upgraded image and the flash application flashes the ROM
and installs the upgraded image.

But **Marsh** does not expressly disclose "...*during the system initialization, said system sends a message to a server coupled to the network to determine whether an upgraded image is available for said ROM*" or "...*during the system initialization, said system receives an upgraded...*". However, **Asco** discloses:

- "...*said system sends a message to a server coupled to the network to determine whether an upgraded image is available for said ROM...*" (E.g., see Fig. 3 and Column 4, lines 26-56), wherein, the microcode is the upgraded BIOS image for a programmable ROM.

Marsh and **Asco** are analogous art because they are both concerned with the same field of endeavor, namely, a firmware upgrade via the Internet. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify **Marsh's** method for updating firmware with **Asco's** invention. The motivation to do so would have been to further achieve **Asco's** objective of "...making the upgrade process more user friendly..." (Page 1, lines 43-44). Each individual user would not have to find and remember details of Internet addresses for the microcode supplier. This would save time and increase productivity by letting the individual user focus on other tasks.

Marsh and **Asco** disclose the system as described above. But **Marsh** and **Asco** do not expressly disclose "..."...*during the system initialization, said system sends a message to a server coupled to the network ...*". However **Jennery** discloses:

- "...*during the system initialization, said system sends a message to a server coupled to the network_...*" (E.g., see Figure 8A (72) & Column

13, lines 36-39), wherein the system (network device), during system

initialization, sends or forwards a message (trigger data) to a server

coupled to a network.

- *"...during the system initialization, said system receives an*

   upgraded..." (E.g., see Figure 8A (76) & Column 3, lines 39-44),

   wherein the system (network device), during system initialization or

   boot sequence, receives (trigger data) from a server coupled to a

   network.

   Jennery, and the combined teaching of **Marsh** and **Asco,** are analogous art

because they are both concerned with the same field of endeavor, namely, an

automated method to update software. Therefore, at the time the invention was made, it

would have been obvious to a person of ordinary skill in the art to modify the combined

teaching method for updating software with **Jennery's** invention. The motivation to do

so would have been to further achieve **Marsh's** objective of "...avoiding manual

intervention..." (Page 2, Paragraph [0013]), and **Asco's** objective as disclosed above.

   In regard to claim **4,** claim **4** is rejected as a system of previously disclosed claim

1, wherein the corresponding limitations of claim **4** are addressed in claim **1.**

   In regard to claim **6, Marsh, Asco** and **Jennery** disclose the system of claim **1**

above. But in claim **1,** they did not disclose expressly *"...wherein the message includes*

an indication of the version of the ROM's current image." However, **Asco** discloses:

- *"...wherein the message includes an indication of the version of the*

   ROM's current image." (E.g., see Fig. 3 & Column 1, lines 48-63),

wherein, the microcode level is the version of the ROM's current

image.

In regard to claim **7**, **Marsh, Asco** and **Jennery** disclose the system of claim **1**

above. But in claim **1**, they did not disclose expressly "...*wherein the message includes*

an indication of the class of the ROM." However, **Asco** discloses:

- "...*wherein the message includes an indication of the an indication of*

the class of the ROM." (E.g., see Fig. 3 & Column 1, lines 48-63),

wherein, the relevant hardware configuration is an indication of the

class of the ROM.

In regard to claim **9**, claim **9** is rejected as a method version of claim **1**.

Correspondingly, **Marsh, Asco** and **Jennery** disclose the limitations of claim **9** as

described above in claim **1**. Thus the limitations are met for claim **9** as disclosed in the

respective above claims.

Respectively, claims **11, 13 and 15** are rejected as method versions of claims **4,**

6 and 7. Likewise, the limitations of the aforementioned claims are disclosed as

described in their corresponding claims. Thus, the limitations are met for claims **11, 13**

and 15.

In regard to claim **16, Marsh** discloses "*A ROM image system...*" as disclosed in

claim **1**, wherein the system of claim **1** is presented within a network configuration. But

Marsh does not disclose expressly "...*a server; and a database accessible by said*

server, said database storing information regarding ROM images; wherein said server

receives a message from computer to determine if an upgrade exists for the computer's

ROM image, uses said information to determine if an upgrade is available for the

computer's ROM image and transmits a message to the computer indicating whether an

upgrade is available" or a *"...message from a computer that is currently undergoing a*

system initialization..." and *"...transmits a message to the computer indicating whether*

an upgrade is available during the system initialization of the computer." However, **Asco**

discloses:

> - *"...comprising: a server; and a database accessible by said server,*
>
>   *said database storing information regarding ROM images; wherein*
>
>   *said server receives a message from computer to determine if an*
>
>   *upgrade exists for the computer's ROM image, uses said information*
>
>   *to determine if an upgrade is available for the computer's ROM image*
>
>   *and transmits a message to the computer indicating whether an*
>
>   *upgrade is available."* (E.g., see Figure 2 & Column 1 lines 45 - 63),
>
>   wherein the remote system is the server and the database associated
>
>   with the remote system contains current microcode level and
>
>   configuration information regarding the computer's ROM image. The
>
>   notification to the computer system is the message indicating that an
>
>   updated image is available.

But, **Asco** does not expressly disclose a *"...message from a computer that is*

currently undergoing a system initialization..." and *"...transmits a message to the*

computer indicating whether an upgrade is available during the system initialization of

the computer." However, **Jennery** discloses:

- "...*message from a computer that is currently undergoing a system initialization...*" (E.g., see Figure 8A (72) & Column 13, lines 36-39), wherein the system (network device), during system initialization, sends or forwards a message (trigger data) to a server coupled to a network..

- "...*transmits a message to the computer indicating whether an upgrade is available during the system initialization of the computer.*" E.g., see Figure 8A (76) & Column 3, lines 39-44), wherein the system (network device), during system initialization or boot sequence, receives (trigger data) from a server coupled to a network.

The remaining limitations are met as disclosed in claim 1.

In regard to claim **18,** the rejections of base claim **16** are incorporated as explained above. Furthermore, **Asco** discloses:

- "...*said response includes a pointer to where an upgraded image is located.*" (E.g., see Figure 1 & Column 2, lines 23-27), wherein, the Internet address is a pointer to where an upgraded image is located.

In regard to claim **20, Marsh, Asco** and **Jennery** disclose the method of claim **18** as explained above. Furthermore, **Asco** discloses:

- "...*said pointer includes an IP address.*" (E.g., see Column 2, lines 23 - 27), wherein, the Internet Address is a pointer, which includes an IP address.

In regard to claim **27**, claim **27** encompasses some limitations from claim **16** and claim **1**, and also includes further limitations disclosed by **Asco**. Claim **1** discloses a computer having a programmable ROM coupled to a server communicating with a network, during initialization, without execution of an operating system associated with the CPU. Claim **16** discloses a request to a server, including storage for a ROM image, and a computer requesting a ROM image update from the said server. But the aforementioned claims do not expressly disclose: *"...proxy enterprise ROM server to which the computers couple, said proxy enterprise ROM server communicating with a network external to the enterprise..."* or *"...a plurality of computers..."* or *"...includes a first storage area for an untested ROM image update, and a second storage area for an approved ROM image update..." or "... checks the second storage area for the approved ROM image update to be installed in the at least one of said computers, wherein the approved ROM image update comprises the untested ROM image update that has undergone at least one suitable approval test..."*. However, **Asco** discloses:

- *"... a proxy enterprise ROM server to which the computers couple, said proxy enterprise ROM server communicating with a network external to the enterprise..." and "...a plurality of computers...".* (E.g., see Figure 2 & Column 2, line 64 – Column 3, line 10), wherein, a proxy server to which computers are coupled is the enterprise ROM server. A wide are data processing network comprising a local network connected via the Internet is interpreted as an enterprise computing system comprising a plurality of computers

But, **Marsh, Asco and Jennery** do not expressly disclose "...*includes a first storage area for an untested ROM image update, and a second storage area for an approved ROM image update..." or "... checks the second storage area for the approved ROM image update to be installed in the at least one of said computers, wherein the approved ROM image update comprises the untested ROM image update that has undergone at least one suitable approval test...*". However, it would have been obvious to one of ordinary skill in the art, to test the upgrade before deploying it. It would have been obvious because it is old and well known in the art that before an upgrade or revision is issued for deploying it should be tested. Therefore it would have been obvious to include a first storage area for an untested ROM image update and to install the tested upgrade image as is well known in the art.

In regard to claim **28**, the rejections of base claim **1** are incorporated. Furthermore, **Jennery** discloses:

- "...*upon each occurrence of the system initialization*". (E.g., see Figure 8A (72) & Column 13, lines 36-39), wherein the system (network device), during system boot sequence, which happens on each occurrence of the system initialization, sends or forwards a message (trigger data) to a server coupled to a network.

4.   Claims **5, 12** and **19** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Marsh**, **Asco** and **Jennery** as applied to claim **1** above, and further in view of

Martinez.

In regard to claim **5**, **Marsh, Asco** and **Jennery** disclose the system of claim **1**

above. But in claim **1**, they did not disclose expressly "...*wherein said system receives*

a link to another server which provides the upgraded image." However, **Martinez** (US

6,594,757), discloses:

- "...*wherein said system receives a link to another server which*

  provides the upgraded image." (E.g., see Fig. 3A & Column 2, line 65 –

  Column 3, line 2), wherein it would have been obvious to a person of

  ordinary skill in the art to store a web page on a server.

Martinez and the combined teachings of **Marsh, Asco** and **Jennery,** are

analogous art because they are both concerned with the same field of endeavor,

namely, an upgradeable BIOS program. Therefore, at the time the invention was made,

it would have been obvious to a person of ordinary skill in the art to implement

Martinez's limitation into the combined teaching method for updating firmware. The

motivation to do so would have been to further decrease manual intervention by simply

providing the URL to an executable rather than manually downloading it to a pre-

specified server. The advantages would be time and cost savings.

Claim **12** is rejected as method versions of claim **5**. Likewise, the limitations of

the aforementioned claim are disclosed as described. Thus, the limitations are met for

claim **12**.

In regard to claim **19**, the rejections of base claim **18** are incorporated as

explained above. Furthermore, **Martinez** discloses:

- "...*said pointer includes a URL.*" (E.g., see Figure 3A & Column 2, line

    65 – Column 3, line 2), wherein the retrieved page is a pointer which

    includes a URL.

5.   Claims **8** and **14** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Marsh, **Asco** and **Jennery** as applied to claim **1** above, and further in view of **Olarig**

(US 6,009,524).

In regard to claim **8**, **Marsh**, **Asco** and **Jennery** disclose the system of claim **1**

above. But in claim **1**, they did not disclose expressly "...*wherein said message*

includes an encryption key to be used to help assure the authenticity of the image."

However, **Olarig** discloses:

- "...*wherein said message includes an encryption key to be used to*

    help assure the authenticity of the image." (E.g., see Fig. 2 & Column

    4, lines 59-67), wherein, a dual-key digital-signature-verification system

    are used to assure authenticity.

Olarig and the combined teachings of **Marsh**, **Asco** and **Jennery** are analogous

art because they are both concerned with the same field of endeavor, namely, an

upgradeable BIOS program. Therefore, at the time the invention was made, it would

have been obvious to a person of ordinary skill in the art to implement **Olarig's**

limitation into the combined teaching method for updating firmware. The motivation to

do so would have been to assure authenticity of the BIOS program. Thereby, eliminating a tampered program that could have severe time and cost consequences in addition to security issues.

Claim **14** is rejected as a method version of claim **8**. Likewise, the limitations of the aforementioned claim are disclosed as described. Thus, the limitations are met for claim **12**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Romano whose telephone number is (571) 272-3872. The examiner can normally be reached on 8-5:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TUAN DAM
SUPERVISORY PATENT EXAMINER